

KENWOOD

KS-303HT

SPEAKER SYSTEM

INSTRUCTION MANUAL

KENWOOD CORPORATION

Your choice of this product indicates that you are a devotee to excellence in sound reproduction. We appreciate your patronage and take pride in the long tradition of quality components that our company represents. So that you can get the most out of your unit, we suggest that you take the time to read through this manual before you hook up and operate your system. This will acquaint you with operating features and system-connection considerations so that your listening pleasure will be enhanced right from the start. You will notice that in all aspects of planning, engineering, styling, operating convenience and adaptability we have sought to anticipate your needs and desires.

Keep this manual handy for future reference.

For your records

Record the serial number, found on the back of each unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

Model KS-303HT is composed of the front speakers, subwoofer, center speaker and rear (surround) speakers.

FRONT SPEAKER, CENTER SPEAKER, REAR SPEAKER

Serial number _____

SUBWOOFER

Serial number _____

Unpacking

Unpack the system carefully and make sure that all accessories are put aside so they will not be lost.

Examine the system for any sign of shipping damage. If your system is damaged or fails to operate, notify your dealer immediately. If your system was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the system) can file a claim against the carrier for shipping damage.

We recommend that you retain the original carton and packing materials for use should you transport or ship the system in the future.

Accessories

Pin-plug cord (1)



Speaker wires (5)



Cushions (4)




Speaker wires: [Red/Black]4.5m(14ft), [Blue/Black]4.5m(14ft), [Orange/Black]6m(19ft), [Gray/Black]6m(19ft), [Green/Black]3m(9ft)

How to use the cushions

Attach four cushions to the bottom of the subwoofer, on at each corner.

The cushions prevent the subwoofer from sliding and dampen its vibrations.

 **Caution:** Read this section carefully to ensure safe operation.

Units are designed for operation as follows.

U.S.A. and Canada AC 120 V only

Safety precautions

WARNING:

TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.





THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

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Caution: Read the pages marked  carefully to ensure safe operation.

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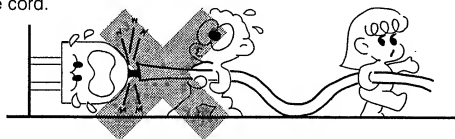
IMPORTANT SAFEGUARDS

⚠ Caution: Read this page carefully to ensure safe operation.

Please read all of the safety and operating instructions before operating this appliance. Adhere to all warnings on the appliance and in the instruction manual. Follow all the safety and operating instructions. These safety and operating instructions should be retained for future reference.

1. **Power sources** – The appliance should be connected to a power supply only of the type described in the instruction manual or as marked on the appliance. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company. For appliances intended to operate from battery power, or other sources, refer to the instruction manual.
2. **Power-cord protection** – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

Never pull or stretch the cord.

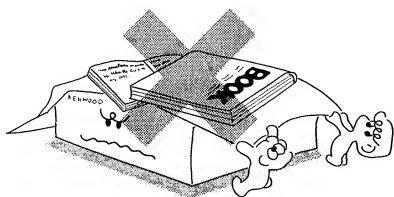


3. **CAUTION – Polarization** – This appliance may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

4. **Ventilation** – Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the appliance and to protect it from overheating, and these openings must not be blocked or covered. The appliance should be situated so that its location or position does not interfere with its proper ventilation.

To maintain good ventilation, do not put records or a tablecloth on the appliance. Place the appliance at least 10 cm away from the walls.

Do not use the appliance on a bed, sofa, rug or similar surface that may block the ventilation openings. This appliance should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.

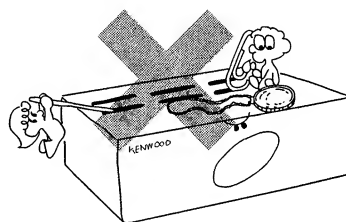


5. **Water and moisture** – The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

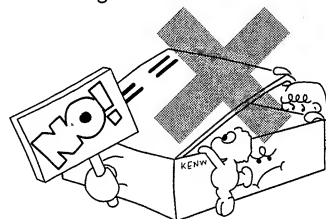
6. **Temperature** – The appliance may not function properly if used at extremely low, or freezing temperatures. The ideal ambient temperature is above +5°C (41°F).

7. **Heat** – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

8. **Electric shock** – Care should be taken so that objects do not fall and liquid is not spilled into the enclosure through openings. If a metal object, such as a hair pin or a needle, comes into contact with the inside of this appliance, a dangerous electric shock may result. For families with children, never permit children to put anything, especially metal, inside this appliance.



9. **Enclosure removal** – Never remove the enclosure. If the internal parts are touched accidentally, a serious electric shock might occur.



10. **Magnetic fields** – Keep the appliance away from sources of magnetic fields such as TV sets, speaker systems, radios, motorized toys or magnetized objects.

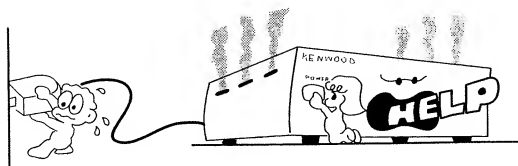
11. **Cleaning** – Unplug this appliance from the wall outlet before cleaning. Do not use volatile solvents such as alcohol, paint thinner, gasoline, or benzene, etc. to clean the cabinet. Use a clean dry cloth.

12. **Accessories** – Do not place this appliance on an unstable cart, stand, tripod, bracket, or table. The appliance may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the appliance. Any mounting of the appliance should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



13. Lightning – For added protection for this appliance during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the appliance due to lightning and power-line surges.

14. Abnormal smell – If an abnormal smell or smoke is detected, immediately turn the power OFF and unplug the appliance from the wall outlet. Contact your dealer or nearest service center.

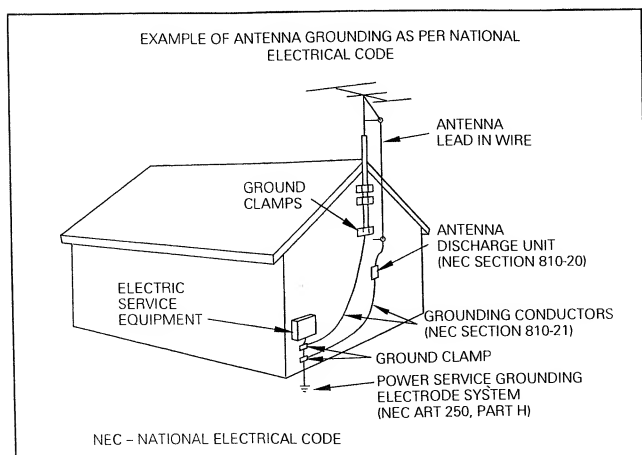


15. Damage requiring service – The appliance should be serviced by qualified service personnel when:

- A.** The power-supply cord or the plug has been damaged.
- B.** Objects have fallen, or liquid has been spilled into the appliance.
- C.** The appliance has been exposed to rain or water.
- D.** The appliance does not appear to operate normally by following the instruction manual. Adjust only those controls that are covered by the instruction manual as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the appliance to its normal operation.
- E.** The appliance has been dropped, or the enclosure damaged.
- F.** The appliance exhibits a marked change in performance.

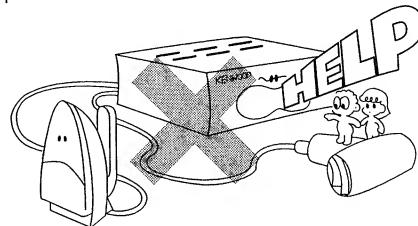
16. Servicing – The user should not attempt to service the appliance beyond that described in the instruction manual. All other servicing should be referred to qualified service personnel.

17. Outdoor antenna grounding – If an outside antenna is connected to the appliance, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Article 810 of the National Electrical Code ANSI/NFPA 70, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure.



18. Power lines – An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

19. AC outlets – Do not connect other audio equipment with a power consumption larger than that specified to the AC outlet on the rear panel. Never connect other electrical appliances, such as an iron or toaster, to it to prevent fire or electric shock.



20. Overloading – Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

21. Attachment – Do not use attachments not recommended by the appliance manufacturer as they may cause hazards.

22. Replacement parts – When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock, or other hazards.

23. Safety check – Upon completion of any service or repairs to this appliance, ask the service technician to perform safety checks to determine that the appliance is in proper operating condition.

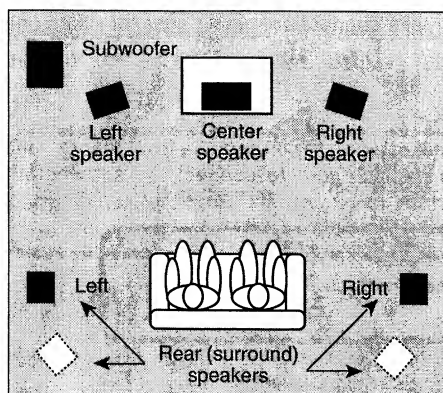
Notes:

- 1. Item 3 is not required except for grounded or polarized equipment.
- 2. Item 17 and 18 are not required except for units provided with antenna terminals.
- 3. Item 17 complies with UL in the U.S.A.

Installation

■ Positioning For Optimal Surround Sound

This speaker system can provide full Surround sound. To enjoy the full effect of the Surround sound field, please position the speakers as described below.



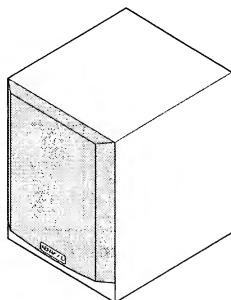
- Place the left and right speakers at opposite sides of your TV. Angle the speakers towards the listening area to enhance the stereo effect.
- Place the center speaker above or below the TV, so that the center of the speaker is aligned with the center of the TV. Tilt the speaker upward or downward so that it is directly facing the listening area.
- Place the rear (surround) speakers as high as possible, either directly to the sides of the listening area or else slightly behind the listening area. Adjust the angles so that these speakers are facing directly towards the listeners.
- Place the subwoofer near a wall to enhance the depth of the bass. For deepest overall bass output, place the subwoofer in a corner.

CAUTION (Subwoofer only)

To assure adequate ventilation, observe the following points when setting up the subwoofer.

- Set the subwoofer so that the heat sink is at least 10 cm (4 inches) away from the wall.
- Be sure that the heat sink is not covered or blocked. Do not drape sheets or other coverings over the subwoofer.
- This subwoofer must be set up vertically. Please do not set it horizontally.

Vertical installation



■ Feedback (Howling)

Installing the subwoofer too close to an analog record player may result in howling, caused by feedback of sound into the player. You can correct the problem by reducing the subwoofer volume (turn the VOLUME dial counterclockwise) or by moving the subwoofer further from the player.

In rare cases, feedback may also occur with cassette decks or with CDs, laser disc, and DVD players. Again, you can correct the problem by reducing the subwoofer volume or moving the subwoofer.

■ About Using Speakers Near a TV

The front and center speakers include magnetic shielding and can therefore be installed close to a TV set. Note, however, that placing speakers too close to a TV may in some cases produce distortion in the color reception. To ensure that there is no problem with color reception, proceed as follows.

1. Install the front and center speakers first (do not install the subwoofer yet), then turn on the TV and check that color reproduction is normal. If color is distorted, turn the TV off for 15 to 30 minutes, then turn it back on and check again. (This allows the TV's degaussing circuitry to correct for the magnetic field from the speakers.) If distortion is still present, move the speakers further from the TV.
2. Install the subwoofer. If color distortion is noticeable, turn the TV off for 15 to 30 minutes, then turn it back on and check again. If distortion is still present, move the subwoofer further from the TV.

■ Installation Methods

● On Floor or Shelf

Place the speakers on the floor or on a shelf or other horizontal stable surface. Keep in mind that speakers are not fixed into place, so be careful to avoid knocking them over.

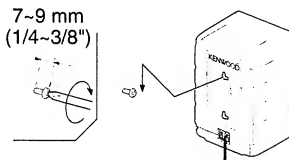
● On the Wall

The front, center, and rear speakers include mount holes for wall mounting. You can hang the speakers on the wall either vertically or horizontally.

For vertical mount, you use only one screw and hang the speaker from its upper mount hole only. For horizontal mount, you need to set two screws into the wall at the appropriate distance so that you can hang the speaker from both mount holes. Proceed as follows. Note that the subwoofer cannot be mounted on the wall.

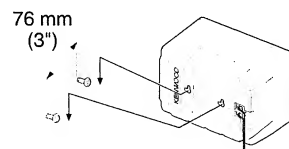
To hang a speaker vertically:

1. Screw a single screw into the wall at the desired location. Screw it only part way in, so that the screw projects 7 to 9 mm (1/4 to 3/8 inches) outward from the wall surface.
2. Hang the speaker by fitting the top mount hole (at the upper rear of the speaker) over the extending part of the screw. Confirm that the speaker is held firmly and securely in place.



To hang a speaker horizontally:

1. Screw two screws into the walls 76 mm (3 inches) apart, making sure that screws are horizontally level. Screw each screw only part way in, so that it projects 7 to 9 mm (1/4 to 3/8 inches) outward from the wall surface.
2. Hang the speaker by fitting the two mount holes (at the rear of the speaker) over the extending part of the screws. Confirm that the speaker is held firmly and securely in place.



Precautions

Please observe the following precautions when mounting speakers onto the wall.

- Be sure that the wall you are using is strong enough to support the full weight of the speaker (approx. 1.2 g [2.6 lb]).
- Wall screws must be purchased separately. Be sure to use screws that are appropriate for the wall you are using, and that are long enough to provide sufficient strength.
- If you are uncertain about the wall's support strength, the type of screw to use, or any other points regarding this type of installation, please consult a contractor or other qualified person before proceeding.

Be sure to follow the procedure given here when carrying out installation.

Kenwood can assume no liability for injury or damage that may occur if a speaker setup falls from the wall as a result of incorrect installation or insufficient support strength.

Connections

Before connecting:

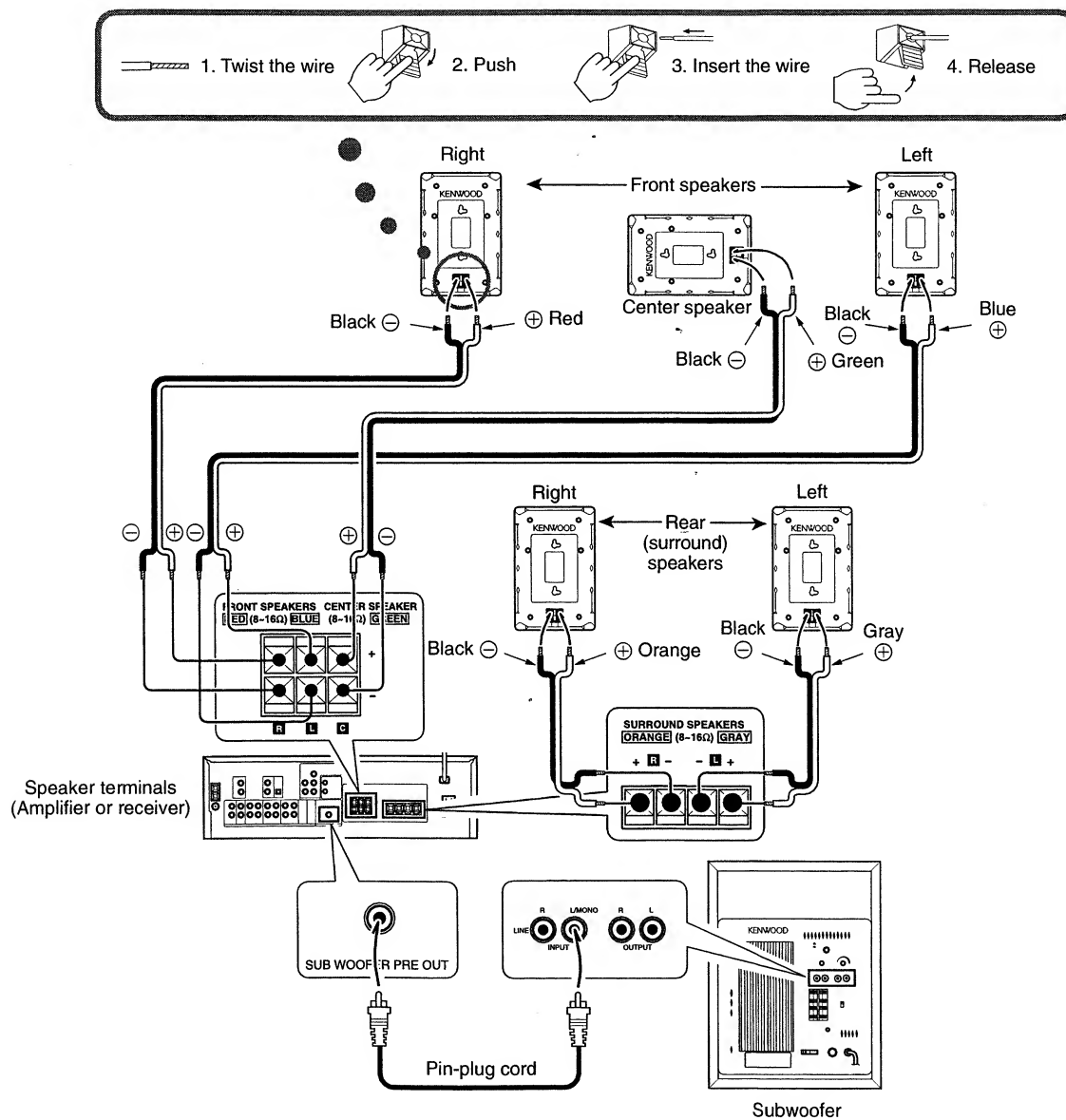
Set the **POWER** switches on the receiver and subwoofer to **OFF**. Leaving **POWER** switches **ON** while making connections may result in damage to your components.

Method 1: Make connections using the included speaker wires and pin-plug cord.

Method 2: If you cannot make connections properly by Method 1, you can also make connections using speaker wires only, without using the pin-plug cord.

Method 1 : Standard connection (recommended)

Make connections using the included speaker wires and pin-plug cord. Use the speaker wires to connect the front, center, and surround speakers to the corresponding terminals on the rear of your receiver. Use the pin-plug cord to connect the subwoofer's **LINE IN (L/MONO)** jack to the receiver's **SUBWOOFER PRE-OUT** jack.



Notes:

1. Be sure to turn off your receiver before connecting or disconnecting speakers.
2. The power-handling capacity of this speaker system is indicated in the specifications. Do not operate the speaker with power exceeding this limitation, as it may damage the speaker.
3. The left and right front speakers and the surround speakers have a nominal impedance of 8 ohms. To ensure safe and reliable operation, be sure that your amplifier or receiver is suitable for use with 8-ohm speakers.

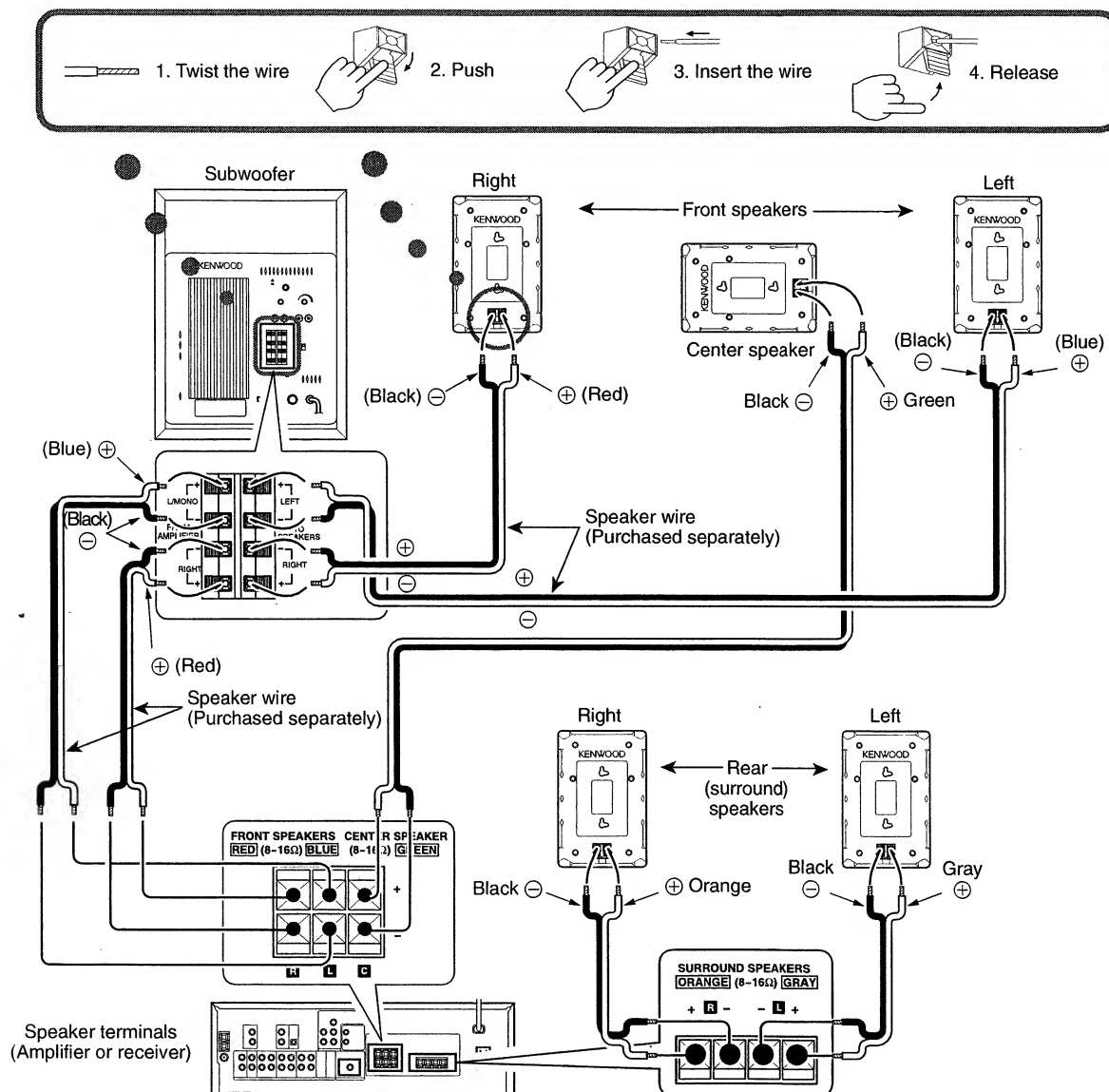
- Never short the (+) and (-) speaker wires together.
- Do not reverse L and R or (+) and (-) connections. Reversal of sides or polarities may result in unnatural, incorrectly positioned sound.

Metnod 2 : Alternative connection (optional)

Make connections using speaker wires only, without using the pin-plug cord.

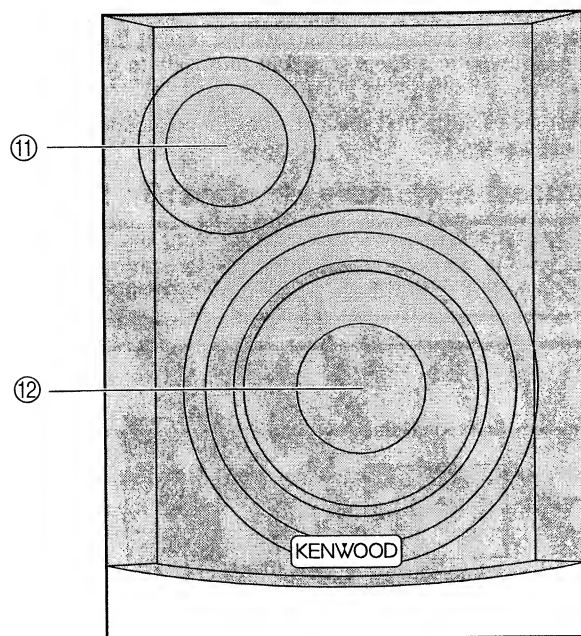
First, connect the receiver's L and R front-speaker terminals to the corresponding input terminals on the rear of the subwoofer (the "FROM AMPLIFIER" L/MONO and RIGHT terminals). Then connect the subwoofer's speaker output terminals to the corresponding terminals on the right and left front speakers.

Be sure to connect (+) terminals to (+) terminals, and (-) terminals to (-) terminals. Note that speaker wires for connecting the subwoofer to the speakers or the subwoofer to the receivers must be purchased separately.

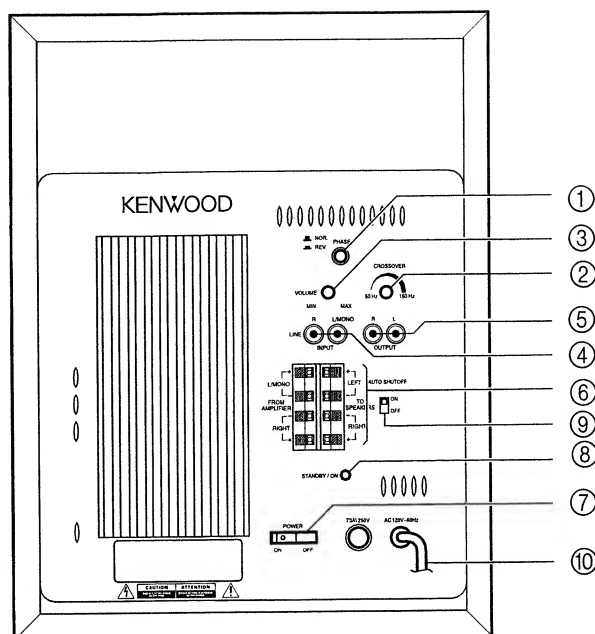


Controls and Indicators (Subwoofer)

Front



Rear



① PHASE switch

The phase relation between the subwoofer and front speakers varies according to the distances, and the subwoofers setup location. Set the phase switch to NOR. (normal phase) or REV (reversed phase) so as to get the best bass sound at the location at which you normally listen.

② CROSSOVER knob

Adjust as necessary for optimal volume of the subwoofer and frequency balance of speakers.

③ VOLUME knob

Use this dial to adjust the volume of the subwoofer and speakers.

④ LINE INPUT (R • L/MONO) terminal

Use to connect to the corresponding SUBWOOFER PRE-OUT jacks on your receiver. If your receiver has only one SUBWOOFER PRE-OUT jack, make the connection using the L/MONO jack.

⑤ LINE OUTPUT (R • L) terminal

These jacks relay the signals received at the corresponding LINE INPUT jacks.

⑥ Speaker Input/Output Terminals

Use to connect to the corresponding FRONT SPEAKERS jacks on your receiver. Connect the FROM AMPLIFIER terminals to the front-speaker output terminals on your receiver.

Use to connect to the front speakers.

The TO SPEAKERS terminals relay the signals received at the corresponding FRONT AMPLIFIER terminals.

⑦ POWER switch

Switches the power ON and OFF.

⑧ STANDBY/ON indicator

Comes on to indicate that power is being supplied. Lights up GREEN during normal operation; lights up RED if the subwoofer has been switched into standby mode by the AUTO SHUTOFF feature.

• Standby mode

During Standby mode (while the STANDBY indicator is lit RED), a small amount of current continues to flow into the unit's internal circuitry so that memory and logic remain active.

The indicator goes off if power is off (if the POWER switch is at the OFF position, or if the subwoofer is not plugged in).

⑨ AUTO SHUTOFF switch

Use this switch to set the automatic shutoff feature ON or OFF. If you set this ON, the subwoofer will automatically enter standby mode if it does not receive a signal from the receiver for a period of 30 minutes. The subwoofer will automatically resume normal power when output from the receiver resumes.

⑩ Power cord

Connect to an AC power outlet.

⑪ Duct

Extends the low-frequency output.

⑫ Loudspeaker

Caution concerning operation:

Be careful to keep the input level to the subwoofer within reasonable limits. Overloading the input will distort the sound quality and may damage the subwoofer. Please observe the following precautions.

1. If supplying a high-volume signal, do not over-boost the bass at the receiver side. (Avoid excessive use of the receiver's bass control or other tone adjusters.)
2. Turn the subwoofer volume to its minimum level when making major changes to the sound input (for example, when first switching on the amplifier or when first dropping the needle onto a vinyl record).

Maintenance

You can clean the panel of subwoofer and casing by wiping with a soft cloth. Never clean with alcohol, benzene, paint thinner, or other such solvents, as these may cause discoloration.

Contact Restorers

Never use contact restoring agents to restore electrical connections, as these may cause the subwoofer to fail. Agents that include oil may in addition lead to deformation of the plastic.

Troubleshooting

If the subwoofer does not seem to be working correctly, the following advice may help you correct the problem.

Problem	Possible Cause	Correction	See page
No sound.	<ul style="list-style-type: none">• Wires are not securely connected.• The volume is turned all the way down.• The receiver's SUBWOOFER PRE-OUT signal is switched off. (Applies only if your receiver includes a pre-put on/off switch.)	<ul style="list-style-type: none">• Connect the wires securely. (Refer to "Connections".)• Raise the volume to an appropriate level.• Switch on the SUBWOOFER PRE-OUT signal at the receiver.	6, 7 pages 8 page
Volume is too low.	<ul style="list-style-type: none">• Speaker wires are reversed.• The phase setting is not appropriate.• The receiver's SUBWOOFER PRE-OUT level is set to the minimum. (Applies only if your receiver includes a pre-out level adjustment.)	<ul style="list-style-type: none">• Reconnect so that L, R, (+), and (-) connections are correct. (Refer to "Connection".)• Change the setting of the PHASE switch.• Raise the SUBWOOFER PRE-OUT level at the receiver.	7 page 8 page

Note:

If the power fails to come on or operation is abnormal, the subwoofer may require repair. Set the POWER switch back to OFF, unplug the power cord, and contact your dealer or nearest service center.

Specifications

■ Front speaker, Center speaker, Rear speaker

	Front speaker	Center speaker	Rear speaker
System	2 way (Magnetically shielded)	2 way (Magnetically shielded)	1 way
Enclosure	Acoustic Air Suspension	Acoustic Air Suspension	Acoustic Air Suspension
Loudspeaker			100 mm(4") Cone type (Full Range type)
Woofer:	100 mm(4") Cone type	100 mm(4") Cone type	—
Tweeter:	50 mm(2") Cone type	50 mm(2") Cone type	—
Nominal Impedance	8 Ω	8 Ω	8 Ω
Peak Input Power	—	80 W	80 W
Maximum Input Power	80 W	40 W	40 W
Sensitivity	88 dB / W at 1 m	88 dB / W at 1 m	85 dB / W at 1 m
Frequency Response	100 Hz~20,000 Hz	100 Hz~20,000 Hz	100 Hz~20,000 Hz
Crossover Frequency	3,000 Hz	3,000 Hz	—
Dimensions			
Width:	129 mm(5-1/16")	129 mm(5-1/16")	129 mm(5-1/16")
Height:	198 mm(7-13/16")	198 mm(7-13/16")	198 mm(7-13/16")
Depth:	120 mm(4-3/4")	120 mm(4-3/4")	120 mm(4-3/4")
Net Weight	1.2 kg (2.6 lb) /piece	1.0 kg (2.2 lb)	0.8 kg (1.8 lb) /piece

■ Subwoofer

	System	Subwoofer system with built-in amplifier
Audio section	Output Power	50 Watts RMS, at 4Ω from 40 Hz to 160 Hz with no more than 0.09% total harmonic distortion
	Input Sensitivity/Impedance RCA-type pin-plug jack (LINE IN):	100 mV/43 kΩ, 200 mV/43 kΩ (MONO)
	Push-type terminals:	1.8 V / 1.2 kΩ
	Turn Over Frequency	80 Hz ~ 160 Hz
	Phase Switching	NORMAL, REVERSE
Speaker section	Enclosure	Bass-Reflex
	Loudspeaker	200 mm (8") Cone type
	Nominal Impedance	4 Ω
	Frequency Response	40 Hz ~ 250 Hz
General	Power Consumption	110 W
	Supply Voltage	AC120 V, 60 Hz
	Dimensions	
	Width:	286 mm (11-1/4")
	Height:	368 mm (14-1/2")
	Depth:	356 mm (14")
	Net Weight	11.2 kg (24.7 lb)
	Enclosure Finish	High density particle board laminated with simulated wood grain vinyl.

NOTE: THE GRILLES ON ALL THE SPEAKERS CANNOT BE REMOVED.

Notes:

1. Kenwood follows a policy of continuous advancements in development. For this reason, specifications may be changed without notice.
2. Full performance may not be exhibited in extremely cold locations (below 0 deg. C).